



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/844,441  | 04/30/2001  | Aaron W. Buchwald    | 1875.0560004        | 9086             |
| 26111   | 7590        | 11/02/2004           | EXAMINER            |                  |
| STERNE, KESSLER, GOLDSTEIN & FOX PLLC<br>1100 NEW YORK AVENUE, N.W.<br>WASHINGTON, DC 20005 |             |                      | ZHENG, EVA Y        |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2634                |                  |

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |  |                     |  |
|------------------------------|------------------------|--|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> |  | <b>Applicant(s)</b> |  |
|                              | 09/844,441             |  | BUCHWALD ET AL.     |  |
|                              | <b>Examiner</b>        |  | <b>Art Unit</b>     |  |
|                              | Eva Yi Zheng           |  | 2634                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 April 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7,20-31 is/are allowed.
- 6) ☒ Claim(s) 8-19 and 32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/10/01; 7/24/02</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 32 recites the limitation "said associated backplane signal path". There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 32 is rejected under 35 U.S.C. 102(b) as being anticipated by Kline et al. (US 5,768,268).

Regarding claim 32, Kline et al. disclose a system for routing high data rate analog data signals, comprising:

a backplane (56 in Fig. 1) having a plurality of signal paths (as shown in Fig. 1);

and

at least one interface board coupled to the backplane, the interface board including a plurality of receivers (28 in Fig. 1) coupled to the backplane signal paths, each said receiver including a phase interpolator (inherent as "Decimator" 276 in Fig. 11) adapted to derive a sampling signal (290 in Fig. 11) having an interpolated phase and

Art Unit: 2634

used to sample an associated analog data signal (Col 4, L 1-9) received from said associated backplane signal path.

### ***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 8-19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-11 of copending Application No. 09,844,432.

This is a provisional obviousness-type double patenting rejection.

Regarding claim 8,

A phase interpolator adapted to produce a sampling signal having an interpolated phase;

A data path adapted to sample and quantize the associated serial data signal in accordance with the sampling signal; and

An interpolator control module (inherent as phase error processor in Application No. 09,844,432) adapted to derive an estimate of a frequency offset between the sampling signal and the serial data signal, the controller being adapted to cause the phase interpolator to rotate the interpolated phase of the sampling signal at a rate corresponding to the frequency offset so as to reduce the frequency offset between the sampling signal and the serial data signal.

Copending Application No. 09,844,432 disclose all the subject above except for the specific teaching of a master timing generator and multiple receive-lanes to receive one of the multiple serial data signals.

However, in a transceiver system, it must include a timing generator for any kind of signal sampling and there must be receiver lanes for receiving a plurality of signals in association with data path for phase processing. Therefore, it is obvious to one of ordinary skill in the art to understand that a timing generator and receive lanes must be in the system of Copending Application No. 09,844,432 in order to receive signals, sample signals faster and have better recovery signals.

***Allowable Subject Matter***

7. Claims 1-7 and 20-31 are allowed.
8. The following is an examiner's statement of reasons for allowance:

None of the prior art teaches or suggests a multiple channel communication device comprise a master signal generator and multiple receivers including a sampling

Art Unit: 2634

signal generator for time-staggered sampling signals based on the master timing signal, a data path to sample and quantize the sampling signal, produce multiple time-staggered data sample streams, and a demultiplexer adapted to time-deskew the multiple time-staggered data streams.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eva Yi Zheng whose telephone number is (571) 272-3049. The examiner can normally be reached on 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-879-9306.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Art Unit: 2634

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

October 19, 2004

Eva Yi Zheng  
Examiner  
Art Unit 2634



**SHUWANG LIU**  
**PRIMARY EXAMINER**